

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (Canceled)

25. (Currently Amended) A method of producing gemstone material, the method comprising:

- a) providing a laminate comprising a plurality of dichroic particles sandwiched between two sheet-like substrates; ~~and~~
- b) heating the laminate under vacuum to an elevated temperature of between about 600 degrees Celsius and about 850 degrees Celsius, such that the plurality of dichroic particles become fused between the sheet-like substrates, thereby producing a slab of the gemstone material; and;
- c) cutting the slab into a plurality of faceted gemstones or cabochens.

26. (Canceled)

27. (Currently Amended) The method of claim ~~26~~ 25 wherein following said heating, the laminate is allowed to cool for a desired cooling period, and the

laminate is exposed to substantially atmospheric pressure or super-atmospheric pressure during at least a portion of the cooling period.

28. (Canceled)

29. (Original) The method of claim 25 wherein the laminate is maintained under a vacuum of between about 100 torr to about 0.000001 torr. during at least a period of said heating.

30. (Original) The method of claim 29 wherein the laminate is maintained under a vacuum of between about 1 torr. and about 0.00001 torr. during at least a period of said heating.

31. (Original) The method of claim 30 wherein the laminate is maintained under a vacuum of between about 0.001 torr. and about 0.0001 torr. during at least a period of said heating.

32. (Original) The method of claim 27 wherein said heating is carried out in a vacuum chamber, and the laminate is exposed to said substantially atmospheric pressure or super-atmospheric pressure by venting the vacuum chamber to an ambient atmosphere and/or by delivering pressurized gas into the vacuum chamber.

33. (Original) The method of claim 27 wherein said substrates comprise glass or crystal sheets and said heating brings the glass or crystal sheets to a softened state, and wherein the laminate is exposed to said substantially atmospheric pressure or super-atmospheric pressure before the glass or crystal sheets cool to a hardened state.

34. (Original) The method of claim 33 wherein the laminate is exposed to said substantially atmospheric pressure or super-atmospheric pressure while the glass or crystal sheets are in the softened state.

35. (Original) The method of claim 33 wherein the laminate is exposed to said substantially atmospheric pressure or super-atmospheric pressure before the glass or crystal sheets cool to a temperature below about 600 degrees Celsius.

36. (Original) The method of claim 35 wherein the laminate is exposed to said substantially atmospheric pressure or super-atmospheric pressure while the glass or crystal sheets are at a temperature between about 600 degrees Celsius and about 850 degrees Celsius.

37. (Original) The method of claim 25 wherein the providing of the laminate comprises positioning the plurality of dichroic particles between the two sheet-like substrates.

38. (Original) The method of claim 25 wherein the plurality of dichroic particles comprises crushed dichroic particles, and the providing of the laminate comprises: providing crushed dichroic particles; and positioning a plurality of the crushed dichroic particles between the two sheet-like substrates.

39. (Original) The method of claim 38 wherein the providing of the crushed dichroic particles comprises: providing a glass or crystal sheet bearing a dichroic coating; and crushing the thus-coated glass or crystal sheet.

40. (Original) The method of claim 39 wherein the providing of the glass or crystal sheet bearing a dichroic coating comprises depositing the dichroic coating upon the glass or crystal sheet.

41. (Original) The method of claim 38 wherein the crushed dichroic particles are separated into different groups characterized by different particle size ranges, whereafter at least some particles from different groups are combined in a desired particle size distribution to form said plurality of the crushed dichroic particles.

42. (Original) The method of claim 41 wherein the crushed dichroic particles are separated into different groups by moving the crushed dichroic particles through one or more sieves.

43. (Original) The method of claim 25 further comprising arranging the plurality of dichroic particles in a substantially uniform orientation.
44. (Original) The method of claim 43 wherein the plurality of dichroic particles are arranged in a substantially uniform orientation by imparting shear upon the laminate.
45. (Original) The method of claim 44 wherein the shear is imparted upon the laminate during said heating and/or during a subsequent cooling period.
46. (Original) The method of claim 44 wherein the shear is imparted upon the laminate while the laminate is at a temperature of between about 600 degrees Celsius and about 850 degrees Celsius.
47. (Currently Amended) A method of producing gemstone material, the method comprising:
- a) providing a laminate comprising a plurality of dichroic particles sandwiched between two glass or crystal sheet-like substrates;
 - b) heating the laminate to an elevated temperature such that the plurality of dichroic particles become fused between the sheet-like substrates,
- the method comprising arranging the plurality of dichroic particles in a substantially uniform orientation. ~~The method of claim 43 wherein the laminate is~~

rotated to arrange the plurality of dichroic particles in [[a]] said substantially uniform orientation.

48. (Original) The method of claim 47 wherein the laminate is rotated by placing the laminate on a spinner and spinning the spinner.

49. (Currently Amended) A method of producing gemstone material, the method comprising:

- a) providing two sheet-like substrates;
- b) providing a plurality of dichroic particles;
- c) separating at least some of the dichroic particles into different groups characterized by different particle size ranges;
- d) combining at least some particles from the different groups in a desired particle size distribution to produce size-classified particles;
- e) positioning a plurality of the size-classified particles between the two sheet-like substrates to form a laminate; and
- f) heating the laminate under vacuum to an elevated temperature of between about 600 degrees Celsius and about 850 degrees Celsius, such that said plurality of the size-classified particles become fused between the sheet-like substrates.

50. (Original) The method of claim 49 wherein said heating brings the laminate to a softened state, the method comprising arranging the plurality of

dichroic particles in a substantially uniform orientation by imparting shear upon the laminate while the laminate is in the softened state.

51. (Canceled)

52. (Currently Amended) The method of claim ~~54~~ 49 wherein following said heating, the laminate is allowed to cool for a desired cooling period, and the laminate is exposed to substantially atmospheric pressure or super-atmospheric pressure during at least a portion of the cooling period.

53. (Original) The method of claim 49 wherein said heating brings the laminate to a softened state, the method comprising arranging the plurality of dichroic particles in a substantially uniform orientation by imparting shear upon the laminate while the laminate is in the softened state, and wherein following said heating, the laminate is allowed to cool for a desired cooling period, and the laminate is exposed to substantially atmospheric pressure or super-atmospheric pressure during at least a portion of the cooling period.

Claims 54-57 (Canceled)

58. (New) The method of claim 25 wherein each faceted gemstone or cabochon is cut from the slab so as to have at least one layer of the dichroic particles, wherein each such layer is substantially parallel to a table and/or a

girdle of such faceted gemstone or is substantially parallel to a base of such cabochon.

59. (New) The method of claim 47 wherein at least one of the glass or crystal sheet-like substrates is black glass or black crystal.